

Amendments to the Claims:

This listing of claims replaces all prior versions and listings of claims in the application and presumes entry of the amendments filed December 30, 2003:

Listing of Claims:

1 to 39 (Canceled)

40. (Currently Amended) A method for identifying a compound that inhibits binding of a parathyroid hormone to a parathyroid hormone receptor by competitively binding to the parathyroid hormone receptor, the method comprising:

(a) providing a recombinant polypeptide that: (i) comprises an amino acid sequence that is at least 30% identical to SEQ ID NO:20 at least 6 amino acids and less than the complete amino acid sequence of a parathyroid hormone receptor, and (ii) binds to parathyroid hormone;

(b) contacting the polypeptide with a parathyroid hormone, or a parathyroid hormone receptor-binding fragment thereof, in the presence of a candidate compound; and

(c) comparing the level of binding of the polypeptide to the parathyroid hormone or fragment thereof in the presence of the candidate compound with the level of binding of the polypeptide to the parathyroid hormone or fragment thereof in the absence of the candidate compound, wherein a lower level of binding in the presence of the candidate compound than in its absence indicates that the candidate compound competes with parathyroid hormone for binding to the receptor.

41. (Canceled)

42. (Currently Amended) The method of claim 40, wherein the amino acid sequence of the polypeptide is identical to the sequence of a fragment of a naturally occurring parathyroid hormone receptor.

43. (Currently Amended) The method of claim 40, wherein the amino acid sequence of ~~the polypeptide~~ is identical to the sequence of a fragment of a ~~naturally occurring~~ human parathyroid hormone receptor.

44 to 56 (Canceled)

57. (Currently Amended) The method of claim 40, wherein the ~~complete~~ amino acid sequence of ~~the parathyroid hormone receptor polypeptide in (a)(i) consists of is identical to~~ SEQ ID NO:21.

58. (Currently Amended) A method for identifying a compound that inhibits the binding of parathyroid hormone to a parathyroid hormone receptor, the method comprising:

(a) providing a recombinant polypeptide that: (i) consists of ~~a fragment of a parathyroid hormone receptor-~~ an amino acid sequence that is at least 30% identical to SEQ ID NO:20 and (ii) binds parathyroid hormone or a fragment thereof;

(b) contacting the polypeptide with parathyroid hormone, or a parathyroid hormone receptor-binding fragment thereof, and a test compound; and

(c) determining whether binding of the parathyroid hormone or fragment thereof to the polypeptide is decreased in the presence of the test compound, wherein a decrease in binding indicates that the test compound inhibits the binding of parathyroid hormone to the parathyroid hormone receptor.

59 to 62 (Canceled)

63. (Currently Amended) The method of claim 58, wherein the amino acid sequence of ~~the parathyroid hormone receptor~~ consists of is identical to SEQ ID NO:21.

64 to 70 (Canceled)

71. (Currently Amended) A method for identifying a compound that inhibits the binding of parathyroid hormone to a parathyroid hormone receptor, the method comprising:

- (a) providing a recombinant parathyroid hormone receptor or a parathyroid hormone-binding fragment thereof, wherein the amino acid sequence of the parathyroid hormone receptor is at least 30% identical to SEQ ID NO: 20;
- (b) contacting the parathyroid hormone receptor or fragment thereof with parathyroid hormone or a parathyroid receptor-binding fragment thereof, and a test compound; and
- (c) determining whether binding of the parathyroid hormone or fragment thereof to the parathyroid hormone receptor or fragment thereof is decreased in the presence of the test compound, wherein a decrease in binding indicates that the test compound inhibits the binding of parathyroid hormone to the parathyroid hormone receptor.

72. (Currently Amended) The method of claim 40, wherein the ~~complete~~ amino acid sequence of the parathyroid hormone receptor in (a)(i) consists of is identical to SEQ ID NO:21 with at least one conservative amino acid substitution.

73. (Currently Amended) A method for identifying a compound that inhibits binding of a parathyroid hormone to a parathyroid hormone receptor by competitively binding to the parathyroid hormone receptor, the method comprising:

- (a) providing a recombinant polypeptide that: (i) comprises a fragment of a parathyroid hormone receptor having an amino acid sequence that is at least 30% identical to SEQ ID NO: 20, and (ii) binds to parathyroid hormone;
- (b) contacting the polypeptide with a parathyroid hormone, or a parathyroid hormone receptor-binding fragment thereof, in the presence of a candidate compound; and
- (c) comparing the level of binding of the polypeptide to the parathyroid hormone or fragment thereof in the presence of the candidate compound with the level of binding of the polypeptide to the parathyroid hormone or fragment thereof in the absence of the candidate compound, wherein a lower level of binding in the presence of the candidate compound than in

its absence indicates that the candidate compound competes with parathyroid hormone for binding to the receptor.

74. (New) The method of claim 40, wherein the amino acid sequence comprises one or more of SEQ ID NOs:5-13.

75. (New) The method of claim 40, wherein the amino acid sequence is identical to a fragment of an opossum parathyroid hormone receptor.

76. (New) The method of claim 40, wherein the amino acid sequence is identical to a fragment of a rat parathyroid hormone receptor.

77. (New) The method of claim 40, wherein the amino acid sequence is identical to SEQ ID NO:18.

78. (New) The method of claim 40, wherein the amino acid sequence is identical to SEQ ID NO:19.

79. (New) The method of claim 40, wherein the amino acid sequence is identical to SEQ ID NO:20.

80. (New) The method of claim 40, wherein the amino acid sequence is at least 50% identical to SEQ ID NO:20.

81. (New) The method of claim 40, wherein the amino acid sequence is at least 60% identical to SEQ ID NO:20.

82. (New) The method of claim 40, wherein the amino acid sequence is at least 75% identical to SEQ ID NO:20.

83. (New) The method of claim 58, wherein the amino acid sequence is identical to the sequence of a fragment of a parathyroid hormone receptor.

84. (New) The method of claim 58, wherein the amino acid sequence is identical to the sequence of a fragment of a human parathyroid hormone receptor.

85. (New) The method of claim 58, wherein the amino acid sequence is identical to SEQ ID NO:21 with at least one conservative amino acid substitution.

86. (New) The method of claim 58, wherein the amino acid sequence comprises one or more of SEQ ID NOs:5-13.

87. (New) The method of claim 58, wherein the amino acid sequence is identical to a fragment of an opossum parathyroid hormone receptor.

88. (New) The method of claim 58, wherein the amino acid sequence is identical to a fragment of a rat parathyroid hormone receptor.

89. (New) The method of claim 58, wherein the amino acid sequence is identical to SEQ ID NO:18.

90. (New) The method of claim 58, wherein the amino acid sequence is identical to SEQ ID NO:19.

91. (New) The method of claim 58, wherein the amino acid sequence is identical to SEQ ID NO:20.

92. (New) The method of claim 58, wherein the amino acid sequence is at least 50% identical to SEQ ID NO:20.

93. (New) The method of claim 58, wherein the amino acid sequence is at least 60% identical to SEQ ID NO:20.

94. (New) The method of claim 58, wherein the amino acid sequence is at least 75% identical to SEQ ID NO:20.

95. (New) The method of claim 71, wherein the amino acid sequence is identical to SEQ ID NO:21.

96. (New) The method of claim 71, wherein the amino acid sequence is identical to the sequence of a fragment of a human parathyroid hormone receptor.

97. (New) The method of claim 71, wherein the amino acid sequence is identical to SEQ ID NO:21 with at least one conservative amino acid substitution.

98. (New) The method of claim 71, wherein the amino acid sequence comprises part or all of any one of SEQ ID NOS:5-13.

99. (New) The method of claim 71, wherein the amino acid sequence is identical to a fragment of an opossum parathyroid hormone receptor.

100. (New) The method of claim 71, wherein the amino acid sequence is identical to a fragment of a rat parathyroid hormone receptor.

101. (New) The method of claim 71, wherein the amino acid sequence is identical to SEQ ID NO:18.

102. (New) The method of claim 71, wherein the amino acid sequence is identical to SEQ ID NO:19.

103. (New) The method of claim 71, wherein the amino acid sequence is identical to SEQ ID NO:20.

104. (New) The method of claim 71, wherein the amino acid sequence comprises part or all of any one of SEQ ID NOs:5-13.

105. (New) The method of claim 71, wherein the amino acid sequence is at least 50% identical to SEQ ID NO:20.

106. (New) The method of claim 71, wherein the amino acid sequence is at least 60% identical to SEQ ID NO:20.

107. (New) The method of claim 71, wherein the amino acid sequence is at least 75% identical to SEQ ID NO:20.

108. (New) The method of claim 73, wherein the amino acid sequence is identical to SEQ ID NO:21.

109. (New) The method of claim 73, wherein the amino acid sequence is identical to the sequence of a fragment of a human parathyroid hormone receptor.

110. (New) The method of claim 73, wherein the amino acid sequence is identical to SEQ ID NO:21 with at least one conservative amino acid substitution.

111. (New) The method of claim 73, wherein the amino acid sequence comprises one or more of SEQ ID NOS:5-13.

112. (New) The method of claim 73, wherein the amino acid sequence is identical to a fragment of an opossum parathyroid hormone receptor.

113. (New) The method of claim 73, wherein the amino acid sequence is identical to a fragment of a rat parathyroid hormone receptor.

114. (New) The method of claim 73, wherein the amino acid sequence is identical to SEQ ID NO:18.

115. (New) The method of claim 73, wherein the amino acid sequence is identical to SEQ ID NO:19.

116. (New) The method of claim 73, wherein the amino acid sequence is identical to SEQ ID NO:20.

117. (New) The method of claim 73, wherein the amino acid sequence is at least 50% identical to SEQ ID NO:20.

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118. (New) The method of claim 73, wherein the amino acid sequence is at least 60% identical to SEQ ID NO:20.

119. (New) The method of claim 73, wherein the amino acid sequence is at least 75% identical to SEQ ID NO:20.